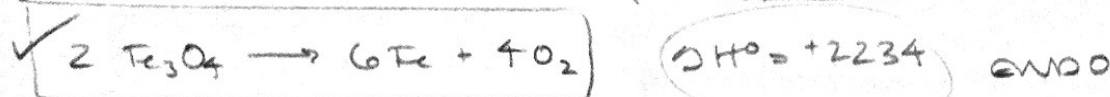
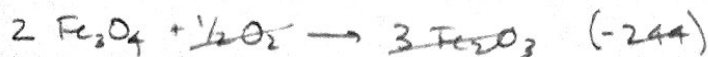
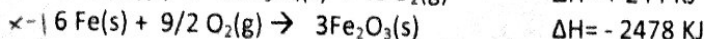
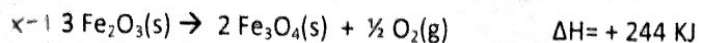


T05D05 - Hess's Law Practice for HW

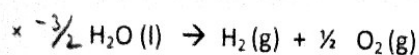
Name KEY

Directions: Solve each of the following using Hess' Law (of Summation).

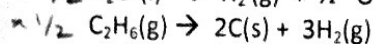
1. Use the thermochemical equations shown below to determine the enthalpy for the reaction: $2 \text{Fe}_3\text{O}_4(\text{s}) \rightarrow 6 \text{Fe}(\text{s}) + 4 \text{O}_2(\text{g})$



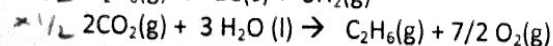
2. Use the thermochemical equations shown below to determine the enthalpy for the reaction: $\text{CO}_2(\text{g}) \rightarrow \text{C}(\text{s}) + \text{O}_2(\text{g})$



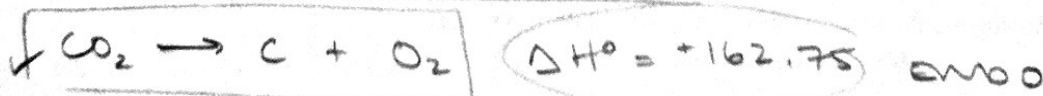
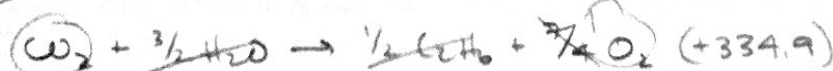
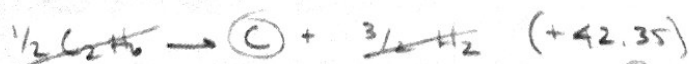
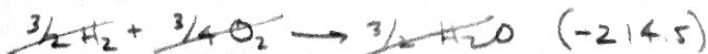
$$\Delta H = +143 \text{ KJ}$$



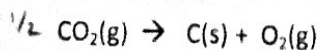
$$\Delta H = +84.7 \text{ KJ}$$



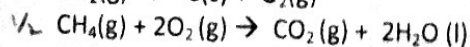
$$\Delta H = +669.8 \text{ KJ}$$



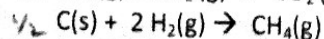
3. Use the thermochemical equations shown below to determine the enthalpy for the reaction: $\text{H}_2(\text{g}) + \frac{1}{2} \text{O}_2(\text{g}) \rightarrow \text{H}_2\text{O}(\text{l})$



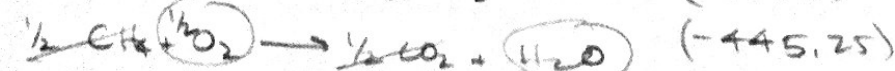
$$\Delta H = +393.5 \text{ KJ}$$



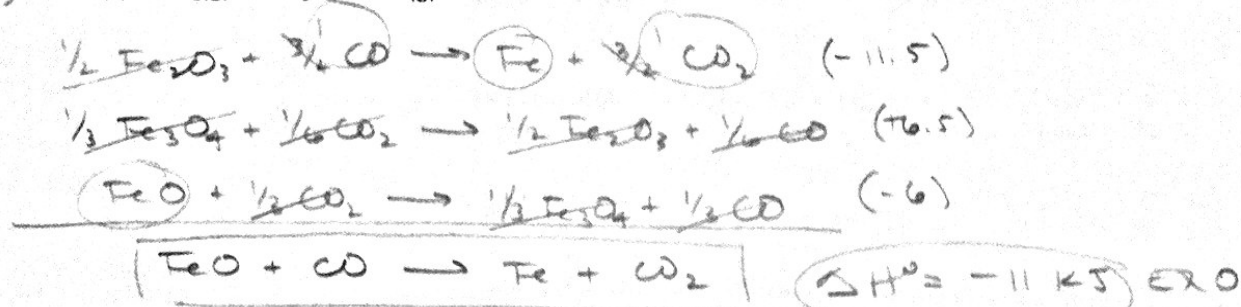
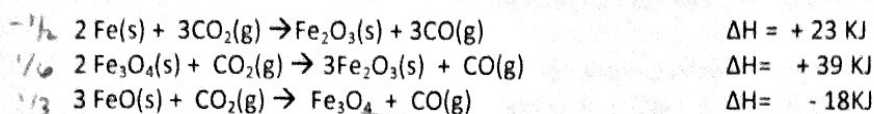
$$\Delta H = -890.5 \text{ KJ}$$



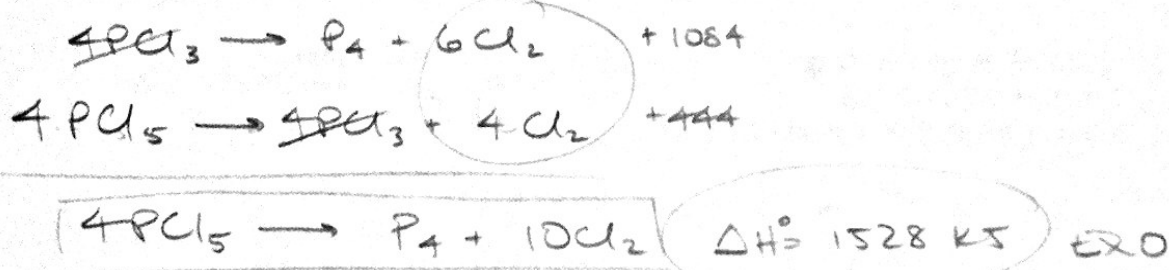
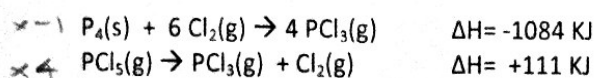
$$\Delta H = -75 \text{ KJ}$$



4. Use the thermochemical equations shown below to determine the enthalpy for the reaction: $\text{FeO(s)} + \text{CO(g)} \rightarrow \text{Fe(s)} + \text{CO}_2\text{(g)}$



5. Use the thermochemical equations shown below to determine the enthalpy for the reaction: $4 \text{PCl}_5\text{(g)} \rightarrow \text{P}_4\text{(s)} + 10 \text{Cl}_2\text{(g)}$



6. Use the thermochemical equations shown below to determine the enthalpy for the reaction: $\text{H}_2\text{S(g)} + 2 \text{O}_2\text{(g)} \rightarrow \text{H}_2\text{SO}_4\text{(l)}$

